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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/599,116

11/13/2006

Kazutoshi Taguchi

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DARBY & DARBY P.C.

P.O. BOX 770

Church Street Station

New York, NY 10008-0770

EXAMINER

JACKSON, MONIQUE R

ART UNIT

PAPER NUMBER

1794

MAIL DATE

DELIVERY MODE

07/25/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/599,116	Applicant(s) TAGUCHI ET AL.	
	Examiner Monique R. Jackson	Art Unit 1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 April 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2 and 4-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2 and 4-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. The amendment filed 4/10/08 has been entered. Claims 1, 2, and 4-10 are pending in the application. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Specification

2. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: a surface roughness (Ra) of the conductive layer of 0.15µm or less, as recited in Claims 8-10 and original Claim 3.

Claim Rejections - 35 USC § 112

3. Claims 1, 2 and 4-10 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Amended Claims 1 and 4 recite that the conductive layer has a surface roughness (Rz) of 0.45µm or less, however, the original disclosure at the time of filing does not provide support for this open-ended range. In reviewing the specification, it is noted that Rz is only disclosed in the tables on pages 15 and 16, with Rz values ranging from 0.374 to 0.45µm. There is no further disclosure or discussion in the specification or original claims as to an Rz of “less than 0.45µm” as instantly claimed, which includes values below those disclosed in the tables.

Claim Rejections - 35 USC § 103

4. Claims 1, 2 and 4-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamaguchi et al (USPN 6,605,366) for generally the reasons recited in the prior office action and restated below, wherein Yamaguchi et al specifically teach that the metal film preferably has a surface roughness Rz of 10 microns or less (*hence fully encompassing the claimed range of 0.45 μ m or less*), and more preferably 0.5 to 7 microns. The Examiner notes that though Yamaguchi et al teach that a more preferred range of Rz is 0.5 to 7 microns, Yamaguchi et al provides a clear suggestion to one having ordinary skill in the art to utilize any Rz within the range of 10 microns or less. Further, given that Yamaguchi et al recite a preferred endpoint of 0.5 microns which is close to the claimed 0.45 μ m endpoint, one having ordinary skill in the art would have been motivated to utilize routine experimentation to determine the optimum surface roughness Rz within the entire disclosed range taught by Yamaguchi et al, wherein the disclose range would have been obvious based on the teachings of Yamaguchi et al, particularly the proximity of the claimed range to the preferred 0.5 micron endpoint, and the lack of a clear showing of unexpected results.

5. Yamaguchi et al teach a metal/polyimide laminate comprising a polyimide layer between metal films including a stainless steel film having not been subjected to a roughening treatment, a metal film having a surface roughness of 0.2 microns or less which has been subjected to a surface roughening treatment, and a copper film having a surface roughness of 10 microns or less, more preferably 0.5 to 7 microns, and a thickness of 5 to 60 microns, preferably 5 to 20 microns (Abstract; Col. 8, lines 18-30.) Yamaguchi et al specifically teach a laminate comprising stainless steel film/polyimide/copper foil, with a rolled copper BHY film having a

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thickness of 18 microns and Ra roughness of 0.18 microns, and also teach that the laminate is suitable in a suspension assembly (Col. 1, Examples.) Though Yamaguchi et al do not teach the surface roughness as claimed, given that Yamaguchi et al teach a range that encompasses the claimed range and an example close to the claimed endpoint, one having ordinary skill in the art at the time of the invention would have been motivated to utilize a copper film as instantly claimed, wherein commercially available copper film are alloyed copper with a strength and electric conductivity as claimed. Further, though Yamaguchi et al do not specifically teach the copper film is etched to provide the claimed roughness and thickness, acid etching and alkaline surface treatment as claimed are obvious processing steps of producing a desired surface roughness wherein a starting film within the disclosed range of Yamaguchi et al, such as 10 microns, would result in an etched film having less than the original thickness, i.e. less than the 10 micron starting thickness.

Double Patenting

6. Claims 1-2 and 4-10 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-5 of copending Application No. 11/887415 for the reasons recited in the prior office action.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Response to Arguments

7. Applicant's arguments with respect to claims 1, 2 and 4-10 have been considered but are moot in view of the new ground(s) of rejection. With regards to the provisional obviousness-

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type double patenting rejection, the Applicant's arguments have been considered however the rejection has been maintained given that the ODP rejection is not the only issue remaining.

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Monique R. Jackson whose telephone number is 571-272-1508.

The examiner can normally be reached on Mondays-Thursdays, 10:00AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena Dye can be reached on 571-272-3186. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Monique R Jackson/
Primary Examiner, Art Unit 1794
July 20, 2008